

AMENDMENT UNDER 37 C.F.R. § 1.111

Application No.: 10/031,407

Atty Docket No.: Q67836

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 2, line 20 with the following rewritten paragraph:

To an aqueous solution of uranyl nitrate small amounts, i.e. between 0.5 and 2 wt%, of organic thickeners are added, such as ~~methocel~~ METHOCEL (a water soluble cellulose polymer), dextran, polyvinyl alcohol, such that the viscosity of the solution is adjusted to values between 20 and 100 centipoise. There-after, this solution is dispersed into droplets, which are introduced into an ammonia bath. In this bath, due to the network formed by the long chain organic polymers, precipitation occurs within the original droplets, so that nearly spherical beads are formed. The size of these beads depends on the size of the droplets produced during dispersion. In a preferred embodiment these beads present diameters of between 20 and 50 μm . These beads are then washed to remove nitrate salts (ammonium nitrate salts in the above example) and organic polymers, and are subjected to an azeotropic distillation using an immiscible organic solvent such as C_2Cl_4 to remove water.

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Please delete the present Abstract of the Disclosure and replace it with the following new Abstract of the Disclosure.

A method for producing mixed oxide nuclear fuel pellets comprises the steps of preparing an U-Pu oxide blend powder having a Pu content in excess of the finally desired value, preparing uranium oxide powder, mixing adequate quantities of both powders in order to achieve the desired plutonium content and compacting and sintering the mixture for obtaining the pellets. The step of preparing the uranium oxide powder involves the following sequence of substeps: a) preparing an aqueous solution of uranyl nitrate to which between 0.5 and 2 wt% of organic thickeners are added such that the viscosity of the solution is adjusted to values between 20 and 100 centipoise, b) dispersing of the solution into droplets, c) introducing the droplets into a hydroxide bath, d) washing the resulting beads, e) drying the beads by azeotropic distillation using an immiscible organic solvent, f) thermally treating the beads in an oxidising atmosphere and g) thermally treating in a reducing atmosphere.